



BioMap and Living Waters

Guiding Land Conservation for Biodiversity in Massachusetts

Core Habitats of Williamstown

This report and associated map provide information about important sites for biodiversity conservation in your area.

This information is intended for conservation planning, and is not intended for use in state regulations.

Produced by:
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries and Wildlife
Executive Office of Environmental Affairs
Commonwealth of Massachusetts

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* Depending on the location of Core Habitats, your city or town may not have all of these sections.

Spring Salamander
(*Gyrinophilus porphyriticus*)
Species of Special Concern



Funding for this project was made available by the Executive Office of Environmental Affairs, contributions to the Natural Heritage & Endangered Species Fund, and through the State Wildlife Grants Program of the US Fish & Wildlife Service.



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Introduction

In this report, the Natural Heritage & Endangered Species Program provides you with site-specific biodiversity information for your area. Protecting our biodiversity today will help ensure the full variety of species and natural communities that comprise our native flora and fauna will persist for generations to come.

The information in this report is the result of two statewide biodiversity conservation planning projects, **BioMap** and **Living Waters**. The goal of the BioMap project, completed in 2001, was to identify and delineate the most important areas for the long-term viability of terrestrial, wetland, and estuarine elements of biodiversity in Massachusetts. The goal of the Living Waters project, completed in 2003, was to identify and delineate the rivers, streams, lakes, and ponds that are important for freshwater biodiversity in the Commonwealth. These two conservation plans are based on documented observations of rare species, natural communities, and exemplary habitats.

What is a Core Habitat?

Both BioMap and Living Waters delineate **Core Habitats** that identify the most critical sites for biodiversity conservation across the state. Core Habitats represent habitat for the state's most viable rare plant and animal populations and include exemplary natural communities and aquatic habitats. Core Habitats represent a wide diversity of rare species and natural communities (see Table 1), and these areas are also thought to contain virtually all of the other described species in Massachusetts. Statewide, BioMap Core Habitats encompass 1,380,000 acres of uplands and wetlands, and Living Waters identifies 429 Core Habitats in rivers, streams, lakes, and ponds.



Core Habitats and Land Conservation

One of the most effective ways to protect biodiversity for future generations is to protect Core Habitats from adverse human impacts through land conservation. For Living Waters Core Habitats, protection efforts should focus on the **riparian areas**, the areas of land adjacent to water bodies. A naturally vegetated buffer that extends 330 feet (100 meters) from the water's edge helps to maintain cooler water temperature and to maintain the nutrients, energy, and natural flow of water needed by freshwater species.

In Support of Core Habitats

To further ensure the protection of Core Habitats and Massachusetts' biodiversity in the long-term, the BioMap and Living Waters projects identify two additional areas that help support Core Habitats.

In BioMap, areas shown as **Supporting Natural Landscape** provide buffers around the Core Habitats, connectivity between Core Habitats, sufficient space for ecosystems to function, and contiguous undeveloped habitat for common species. Supporting Natural Landscape was



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generated using a Geographic Information Systems (GIS) model, and its exact boundaries are less important than the general areas that it identifies. Supporting Natural Landscape represents potential land protection priorities once Core Habitat protection has been addressed.

In Living Waters, *Critical Supporting Watersheds* highlight the immediate portion of the watershed that sustains, or possibly degrades, each freshwater Core Habitat. These areas were also identified using a GIS model. Critical Supporting Watersheds represent developed and undeveloped lands, and can be quite large. Critical Supporting Watersheds can be helpful in land-use planning, and while they are not shown on these maps, they can be viewed in the Living Waters report or downloaded from www.mass.gov/mgis.

Understanding Core Habitat Species, Community, and Habitat Lists

What's in the List?

Included in this report is a list of the species, natural communities, and/or aquatic habitats for each Core Habitat in your city or town. The lists are organized by Core Habitat number.

For the larger Core Habitats that span more than one town, the species and community lists refer to the entire Core Habitat, not just the portion that falls within your city or town. For a list of all the state-listed rare species within your city or town's boundary, whether or not they are in Core Habitat, please see the town rare species lists available at www.nhesp.org.

The list of species and communities within a Core Habitat contains only the species and

Table 1. The number of rare species and types of natural communities explicitly included in the BioMap and Living Waters conservation plans, relative to the total number of native species statewide.

BioMap		
Biodiversity Group	Species and Verified Natural Community Types	
	Included in BioMap	Total Statewide
Vascular Plants	246	1,538
Birds	21	221 breeding species
Reptiles	11	25
Amphibians	6	21
Mammals	4	85
Moths and Butterflies	52	An estimated 2,500 to 3,000
Damselflies and Dragonflies	25	An estimated 165
Beetles	10	An estimated 2,500 to 4,000
Natural Communities	92	> 105 community types
Living Waters		
Biodiversity Group	Species	
	Included in Living Waters	Total Statewide
Aquatic Vascular Plants	23	114
Fishes	11	57
Mussels	7	12
Aquatic Invertebrates	23	An estimated > 2500

natural communities that were explicitly included in a given BioMap or Living Waters Core Habitat. Other rare species or examples of other natural communities may fall within the Core Habitat, but for various reasons are not included in the list. For instance, there are a few rare species that are omitted from the list or summary because of their particular sensitivity to the threat of collection. Likewise, the content of many very small Core Habitats are not described in this report or list, often because they contain a single location of a rare plant



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species. Some Core Habitats were created for suites of common species, such as forest birds, which are particularly threatened by habitat fragmentation. In these cases, the individual common species are not listed.

What does 'Status' mean?

The Division of Fisheries and Wildlife determines a status category for each rare species listed under the Massachusetts Endangered Species Act, M.G.L. c.131A, and its implementing regulations, 321 CMR 10.00. Rare species are categorized as Endangered, Threatened, or of Special Concern according to the following:

- **Endangered** species are in danger of extinction throughout all or a significant portion of their range or are in danger of extirpation from Massachusetts.
- **Threatened** species are likely to become Endangered in Massachusetts in the foreseeable future throughout all or a significant portion of their range.
- **Special Concern** species have suffered a decline that could threaten the species if allowed to continue unchecked or occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become Threatened in Massachusetts.

In addition, the Natural Heritage & Endangered Species Program maintains an unofficial **watch list** of plants that are tracked due to potential conservation interest or concern, but are not regulated under the Massachusetts Endangered Species Act or other laws or regulations. Likewise, described natural communities are not regulated any laws or regulations, but they can help to identify ecologically important areas that are worthy of protection. The status of natural

Legal Protection of Biodiversity

BioMap and Living Waters present a powerful vision of what Massachusetts would look like with full protection of the land that supports most of our biodiversity. To create this vision, some populations of state-listed rare species were deemed more likely to survive over the long-term than others.

Regardless of their potential viability, all sites of state-listed species have full legal protection under the Massachusetts Endangered Species Act (M.G.L. c.131A) and its implementing regulations (321 CMR 10.00). Habitat of state-listed wildlife is also protected under the Wetlands Protection Act Regulations (310 CMR 10.37 and 10.59). The **Massachusetts Natural Heritage Atlas** shows **Priority Habitats**, which are used for regulation under the Massachusetts Endangered Species Act and Massachusetts Environmental Policy Act (M.G.L. c.30) and **Estimated Habitats**, which are used for regulation of rare wildlife habitat under the Wetlands Protection Act. For more information on rare species regulations, see the *Massachusetts Natural Heritage Atlas*, available from the Natural Heritage & Endangered Species Program in book and CD formats.

BioMap and Living Waters are conservation planning tools and do not, in any way, supplant the Estimated and Priority Habitat Maps which have regulatory significance. Unless and until the combined BioMap and Living Waters vision is fully realized, we must continue to protect all populations of our state-listed species and their habitats through environmental regulation.

communities reflects the documented number and acreages of each community type in the state:

- **Critically Imperiled** communities typically have 5 or fewer documented sites or have very few remaining acres in the state.
- **Imperiled** communities typically have 6-20 sites or few remaining acres in the state.
- **Vulnerable** communities typically have 21-100 sites or limited acreage across the state.
- **Secure** communities typically have over 100 sites or abundant acreage across the state; however excellent examples are identified as Core Habitat to ensure continued protection.



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Understanding Core Habitat Summaries

Following the BioMap and Living Waters Core Habitat species and community lists, there is a descriptive summary of each Core Habitat that occurs in your city or town. This summary highlights some of the outstanding characteristics of each Core Habitat, and will help you learn more about your city or town's biodiversity. You can find out more information about many of these species and natural communities by looking at specific *fact sheets* at www.nhesp.org.

Next Steps

BioMap and Living Waters were created in part to help cities and towns prioritize their land protection efforts. While there are many reasons to conserve land – drinking water protection, recreation, agriculture, aesthetics, and others – BioMap and Living Waters Core Habitats are especially helpful to municipalities seeking to protect the rare species, natural communities, and overall biodiversity within their boundaries. Please use this report and map along with the rare species and community fact sheets to appreciate and understand the biological treasures in your city or town.

Protecting Larger Core Habitats

Core Habitats vary considerably in size. For example, the average BioMap Core Habitat is 800 acres, but Core Habitats can range from less than 10 acres to greater than 100,000 acres. These larger areas reflect the amount of land needed by some animal species for breeding, feeding, nesting, overwintering, and long-term survival. Protecting areas of this size can be

very challenging, and requires developing partnerships with neighboring towns.

Prioritizing the protection of certain areas within larger Core Habitats can be accomplished through further consultation with Natural Heritage Program biologists, and through additional field research to identify the most important areas of the Core Habitat.

Additional Information

If you have any questions about this report, or if you need help protecting land for biodiversity in your community, the Natural Heritage & Endangered Species Program staff looks forward to working with you.

Contact the Natural Heritage & Endangered Species Program:

by Phone 508-792-7270, Ext. 200

by Fax: 508-792-7821

by Email: natural.heritage@state.ma.us.

by Mail: North Drive
Westborough, MA 01581

The GIS datalayers of BioMap and Living Waters Core Habitats are available for download from MassGIS: www.mass.gov/mgis

Check out www.nhesp.org for information on:

- Rare species in your town
- Rare species fact sheets
- BioMap and Living Waters projects
- Natural Heritage publications, including:
 - * Field guides
 - * Natural Heritage Atlas, and more!



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BioMap: Species and Natural Communities

Williamstown

Core Habitat BM62

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Sensitive Natural Community		

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Dwarf Scouring-Rush	<i>Equisetum scirpoides</i>	Special Concern
Hemlock Parsley	<i>Conioselinum chinense</i>	Special Concern
Sensitive Rare Plant		
Sweet Coltsfoot	<i>Petasites frigidus var palmatus</i>	Endangered
White Adder's-Mouth	<i>Malaxis monophyllos var brachypoda</i>	Endangered
Woodland Millet	<i>Milium effusum</i>	Threatened

Core Habitat BM63

Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Tule Bluet	<i>Enallagma carunculatum</i>	Special Concern

Core Habitat BM72

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

Core Habitat BM82

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Bush's Sedge	<i>Carex bushii</i>	Endangered
Hitchcock's Sedge	<i>Carex hitchcockiana</i>	Special Concern
Slender Blue-Eyed Grass	<i>Sisyrinchium mucronatum</i>	Endangered



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BioMap: Species and Natural Communities

Williamstown

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Forest Bird Habitat		-----
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Special Concern
Landbird Migration Habitat		-----
Spring Salamander	<i>Gyrinophilus porphyriticus</i>	Special Concern

Core Habitat BM83

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Ridgetop Chestnut Oak Forest/Woodland		Secure

Core Habitat BM85

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Acidic Talus Forest/Woodland		Secure

Core Habitat BM87

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Acidic Rocky Summit/Rock Outcrop Community		Secure

Core Habitat BM88

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		



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BioMap: Species and Natural Communities

Williamstown

Core Habitat BM90

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM98

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM101

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM104

Natural Communities

Common Name

Scientific Name

Status

Sensitive Natural Community

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM130

Natural Communities

Common Name

Scientific Name

Status

Acidic Rocky Summit/Rock Outcrop
Community

Secure

Calcareous Rock Cliff Community

Vulnerable

Calcareous Rocky Summit/Rock Outcrop
Community

Imperiled



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BioMap: Species and Natural Communities

Williamstown

Calcareous Talus Forest/Woodland	Vulnerable
High Elevation Spruce - Fir Forest/Woodland	Imperiled
Rich, Mesic Forest Community	Vulnerable
Spruce - Fir - Northern Hardwoods Forest	Secure
Spruce-Fir Boreal Swamp	Vulnerable

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Bailey's Sedge	<i>Carex baileyi</i>	Endangered
Bartram's Shadbush	<i>Amelanchier bartramiana</i>	Threatened
Black-Fruited Woodrush	<i>Luzula parviflora ssp melanocarpa</i>	Endangered
Bristly Black Currant	<i>Ribes lacustre</i>	Special Concern
Broad Waterleaf	<i>Hydrophyllum canadense</i>	Endangered
Fen Sedge	<i>Carex tetanica</i>	Special Concern
Gattinger's Panic-Grass	<i>Panicum gattingeri</i>	Special Concern
Hairy Wood-Mint	<i>Blephilia hirsuta</i>	Endangered
Hemlock Parsley	<i>Conioselinum chinense</i>	Special Concern
Large-Leaved Goldenrod	<i>Solidago macrophylla</i>	Threatened
Mountain Cranberry	<i>Vaccinium vitis-idaea ssp minus</i>	Endangered
Northern Bedstraw	<i>Galium boreale</i>	Endangered
Northern Bog Violet	<i>Viola nephrophylla</i>	Endangered
Northern Mountain-Ash	<i>Sorbus decora</i>	Endangered
Northern Prickly Rose	<i>Rosa acicularis</i>	Endangered
Sensitive Rare Plant		
Smooth Rock-Cress	<i>Arabis laevigata</i>	Threatened
Stiff Gentian	<i>Gentianella quinquefolia</i>	Watch Listed
Woodland Millet	<i>Milium effusum</i>	Threatened



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Williamstown

Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Dion Skipper	<i>Euphyes dion</i>	Threatened
Early Hairstreak	<i>Erora laeta</i>	Threatened
Elderberry Long-Horned Beetle	<i>Desmocerus palliatus</i>	Special Concern
Tule Bluet	<i>Enallagma carunculatum</i>	Special Concern

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Bat Hibernaculum		-----
Blackpoll Warbler	<i>Dendroica striata</i>	Special Concern
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Special Concern
Long-Tailed Shrew	<i>Sorex dispar</i>	Special Concern
Mourning Warbler	<i>Oporornis philadelphia</i>	Special Concern
Spring Salamander	<i>Gyrinophilus porphyriticus</i>	Special Concern

Core Habitat BM162

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

Core Habitat BM236

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

Core Habitat BM253

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		



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BioMap: Core Habitat Summaries

Williamstown

Core Habitat BM62

Natural Communities

This Core Habitat in Williamstown contains high quality habitats for a variety of Massachusetts' plants and animals.

Plants

Several calcium-loving rare plant species inhabit wetland portions of this Core Habitat, including a small fern relative called the Dwarf Scouring-Rush, and a composite, the Sweet Coltsfoot.

Core Habitat BM63

Invertebrates

This Core Habitat includes a small, spring-fed pool and adjacent wetlands that are located in an undeveloped and unfragmented landscape and are habitat for the rare Tule Bluet damselfly. This Core Habitat appears to be unprotected.

Core Habitat BM82

This large Core Habitat encompasses mainly roadless forests along the eastern slopes of the Taconic Range in Williamstown and Hancock. Multiple high-gradient headwater brooks, supporting significant habitat for Spring Salamanders, flow down these slopes into the West Branch of the Green River and the Housatonic River. Habitat for Jefferson Salamanders exists at lower elevations, and the wetlands and forests here also support rare plant species, such as Slender Blue-Eyed Grass. The majority of this Core Habitat is currently unprotected.

Plants

Several rare plant species are found in the calcareous wet meadows and forests of this area, including two rare sedges and Slender Blue-Eyed Grass.

Vertebrates

The numerous coldwater brooks within this Core Habitat provide significant and connected habitat for Spring Salamanders. Habitat for Jefferson Salamanders is provided by vernal pools in deciduous forests at lower elevations. The long, north-south-oriented forested ridge contained within this Core Habitat provides important breeding and migration habitat for many species of forest songbirds and other landbirds.



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Williamstown

Core Habitat BM83

Natural Communities

This Core Habitat contains a large Ridgetop Chestnut Oak Forest. Ridgetop Chestnut Oak Forests are open forests of dry ridgetops, dominated by Chestnut Oak with a typically dense shrub understory. This community type often occupies dry upland sites with thin soil over acidic bedrock on ridges and slopes. Here the beautiful forest consists of a canopy of Chestnut Oak and Sassafras emerging from a carpet of Huckleberry. It occurs just below the Acidic Rocky Summit of Pine Cobble. This forest is embedded within a 12,000-acre roadless area of natural vegetation.

Core Habitat BM85

Natural Communities

This Core Habitat contains an Acidic Talus Forest that is part of the complex of exemplary natural communities that occur on Pine Cobble. Acidic Talus Forest communities develop on boulder strewn slopes below cliffs, with scattered trees, tall shrubs, vines, and ferns. There is often a gradient of vegetation density as the slope changes, with more trees on the lower slope. This talus slope contains much of the species diversity expected in a Talus Forest community and is well-buffered within a 12,000-acre roadless area of natural vegetation.

Core Habitat BM87

Natural Communities

This Core Habitat contains a large and scenic Acidic Rocky Summit that is embedded within 12,000 acres of unfragmented, naturally forested land. Acidic Rocky Summits are open communities of shrubs, scattered grasses, mosses, lichens and occasional trees found on exposed rocky summits. These areas are dry with little soil, and can often be found as patches within other ridgetop communities. Here the dwarfed Oak and Pine trees and carpet of Huckleberry are minimally affected by the hiking trails leading to this beautiful vista.

Core Habitat BM104

Natural Communities

This Core Habitat along Hemlock Brook provides high-quality habitat for a variety of Massachusetts' plants and animals.



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Core Habitat BM130

This large Core Habitat contains many high-quality natural communities associated with the slopes and summits of Mount Greylock and surrounds. Together these habitats support tremendous biodiversity with many rare species that are adapted to the cooler, montane environment. The Core Habitat contains dozens of rare plant populations, as well as habitat for rare butterflies and damselflies. It is one of the most important areas in the state for Spring Salamanders and one of the few areas to find two rare songbirds. It contains one of the state's few known populations of Long-tailed Shrews and an important underground overwintering area for bats. Along the Mount Greylock ridgeline, this Core Habitat includes the largest High Elevation Spruce-Fir Forest community in the state. While part of this Core Habitat is protected as conservation land, important areas of habitat remain unprotected.

Natural Communities

This large Core Habitat contains many of the exemplary natural communities that occur on the slopes and summits in the Mount Greylock area. Incredibly forceful and interesting geologic events created Mount Greylock as it appears today. Pockets of nutrient-rich rocks, occasionally associated with marble cliffs and outcrops, have resulted in patches of Rich, Mesic Forest on the mountain's lower slopes that support many rare plant species. The largest High Elevation Spruce-Fir Forest in the state occurs along the Mount Greylock ridgeline. Here, atop Massachusetts' highest mountain, Balsam Fir and Red Spruce trees are stunted from extreme exposure to the wind. Poorly drained basins associated with this ridgeline contain good examples of Spruce-Fir Boreal Swamps. These two natural community types are rarely found in Massachusetts, but are more commonly found in the taller mountains to our north.

Plants

This Core Habitat contains dozens of rare plant populations. Many of these rare plant species are adapted to cool temperatures and montane habitats. Two of the state's best populations of the Large-Leaved Goldenrod, which grows in mountainous areas, are found here. It is also home to two large and healthy populations of Bristly Black Currant and several populations of Bartram's Shadbush. The Hairy Wood-Mint is found in this area, as are the very uncommon Northern Prickly Rose, Northern Mountain Ash, and Black-Fruited Woodrush. Lower-elevation areas within this Core Habitat support other rare plant species such as Bailey's Sedge, which is known for its unusual mace-shaped fruiting clusters.

Invertebrates

This Core Habitat includes important habitat for a variety of rare insect species, including the Early Hairstreak butterfly, which inhabits Northern Hardwoods Forest with a complement of Beech; the Dion Skipper butterfly, a species of calcareous fens; the Elderberry Longhorned Beetle, which inhabits wetlands and meadows with thickets of Elderberry; and the Tule Bluet damselfly, a species of lakes such as the Mount Williams Reservoir. This Core Habitat is located less than 5 km from Core Habitat in Florida and Savoy, which probably allows for occasional dispersal of Early Hairstreak butterflies and other rare insect species between these two areas.



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Williamstown

Vertebrates

Numerous cold, high-gradient brooks and headwater seeps make this one of the most important Core Habitats in the state for protecting extensive, connected populations of Spring Salamanders. Significant habitat for Jefferson Salamanders occurs at lower elevations near clusters of vernal pools within deciduous forests. This is one of the few areas of the state that supports breeding Blackpoll Warblers and Mourning Warblers, two species of songbirds found more commonly in forests of northern New England. Rocky forests at upper elevations provide habitat for one of the few documented populations of Long-tailed Shrews in the state. This Core Habitat also contains forested habitat around the entrance to an important bat hibernaculum (underground overwintering area). Although this Core Habitat is anchored by the large block of conservation land protected within Mount Greylock State Reservation, other large and important areas to the east, west, and south remain unprotected.



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Living Waters: Species and Habitats

Williamstown

Core Habitat LW054

Fishes

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
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Longnose Sucker	<i>Catostomus catostomus</i>	Special Concern
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Core Habitat LW074

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
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Water Star-grass	<i>Heteranthera dubia</i>	Watch Listed
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Fishes

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
--------------------	------------------------	---------------

Bridle Shiner	<i>Notropis bifrenatus</i>	Special Concern
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Core Habitat LW302

Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
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Appalachian Brook Crayfish	<i>Cambarus bartonii</i>	Special Concern
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Fishes

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
--------------------	------------------------	---------------

Longnose Sucker	<i>Catostomus catostomus</i>	Special Concern
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Core Habitat LW304

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
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Water Star-grass	<i>Heteranthera dubia</i>	Watch Listed
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Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
--------------------	------------------------	---------------

Appalachian Brook Crayfish	<i>Cambarus bartonii</i>	Special Concern
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Living Waters: Species and Habitats

Williamstown

Fishes

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Bridle Shiner	<i>Notropis bifrenatus</i>	Special Concern
Longnose Sucker	<i>Catostomus catostomus</i>	Special Concern

Core Habitat LW334

Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Appalachian Brook Crayfish	<i>Cambarus bartonii</i>	Special Concern



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Living Waters: Core Habitat Summaries

Williamstown

Core Habitat LW054

This Core Habitat in the West Branch of the Green River and its tributaries supports the Longnose Sucker, a fish Species of Special Concern. This species is restricted to the western watersheds of Massachusetts, where it is found in cold, clean, oxygen-rich streams with gravel bottoms. The Longnose Sucker sometimes migrates many miles to reach its spawning grounds. The eggs are released over the gravel bottom, making them susceptible to excess sedimentation, flow alterations, and increases in water temperature. These habitat degradations can be particularly detrimental to the reproductive success of this slow-growing fish that does not reach maturity until 5 to 7 years of age. Protecting the riparian areas adjacent to this Core Habitat will help maintain the cool, clean freshwater habitat of the Longnose Sucker.

Core Habitat LW074

This Core Habitat supports one of five known populations of Bridle Shiner in the Hudson Watershed. This fish Species of Special Concern has a small range from southern New England to South Carolina, and has been declining or extirpated in much of the region. The Bridle Shiner is typically found in well-vegetated, quiet waters. It feeds on small aquatic insects and other invertebrates, and is an important part of the freshwater ecosystem as prey for larger fishes.

Shallow areas of this small pond also support a population of the uncommon Water Star-Grass, which has yellow flowers and long grass-like leaves. Native freshwater plants like the Water Star-Grass are an important component of aquatic ecosystems, providing habitat and nutrition for fishes and invertebrates, and adding oxygen to the water through photosynthesis.

Core Habitat LW302

This Core Habitat is centered on the Hoosic River in Adams, and extends upstream into Tophet Brook and its tributaries, as well as into Pecks Brook and its tributaries. These freshwater habitats support the Longnose Sucker, a fish Species of Special Concern. This species is restricted to the western watersheds of Massachusetts, where it is found in cold, clean, oxygen-rich streams with gravel bottoms. The Longnose Sucker sometimes migrates many miles to reach its spawning grounds. The eggs are released over the gravel bottom, making them susceptible to excess sedimentation, flow alterations, and increases in water temperature. These habitat degradations can be particularly detrimental to the reproductive success of this slow-growing fish that does not reach maturity until 5 to 7 years of age.

Pecks Brook and its tributaries also provide habitat for the Appalachian Brook Crayfish, a Species of Special Concern. This secretive crayfish is restricted to the Hoosic River Watershed in Massachusetts, where it tunnels under large rocks and boulders in hillstreams. Pecks Brook reaches into some of the highest elevations on Mount Greylock of any hillstreams known to support this species. Potential threats to the Appalachian Brook Crayfish include competition from introduced, non-native crayfish species as well as habitat degradation from damming or development in the adjacent riparian areas.



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Living Waters: Core Habitat Summaries

Williamstown

Core Habitat LW304

This large Core Habitat is centered on the Hoosic River in Williamstown and extends up several tributaries, as well as up the Green River all the way into New Ashford. These freshwater habitats support rare fishes, invertebrates, and plants.

Portions of the Core Habitat in the Hoosic River, Hemlock Brook, and the Green River support the Longnose Sucker, a fish Species of Special Concern. This species is restricted to the western watersheds of Massachusetts, where it is found in cold, clean, oxygen-rich streams with gravel bottoms. The Longnose Sucker sometimes migrates many miles to reach its spawning grounds. The eggs are released over the gravel bottom, making them susceptible to excess sedimentation, flow alterations, and increases in water temperature. These habitat degradations can be particularly detrimental to the reproductive success of this slow-growing fish that does not reach maturity until 5 to 7 years of age.

A section of the Hoosic River in Williamstown supports another rare fish species, the Bridle Shiner. This fish Species of Special Concern has a small range from southern New England to South Carolina, and has been declining or extirpated in much of the region. The Bridle Shiner is typically found in well-vegetated, quiet waters. It feeds on small aquatic insects and other invertebrates, and is an important part of the freshwater ecosystem as prey for larger fishes.

Several of the headwaters in this Core Habitat, including Sherman Brook, Notch Brook, Roaring Brook, and the upper reaches of the Green River in New Ashford, support the Appalachian Brook Crayfish, an invertebrate Species of Special Concern. This secretive crayfish is restricted to the Hoosic River Watershed in Massachusetts, where it tunnels under large rocks and boulders in hillstreams. Potential threats to this species include competition from introduced, non-native crayfish species as well as habitat degradation from damming or development in the adjacent riparian areas.

Within the larger Core Habitat, a small impoundment north of the Hoosic River in Williamstown supports a population of the uncommon Water Star-Grass, a plant with tiny yellow flowers and long grass-like leaves. Native freshwater plants like the Water Star-Grass are an important component of aquatic ecosystems, providing habitat and nutrition for fishes and invertebrates, and adding oxygen to the water through photosynthesis.

Core Habitat LW334

This section of Birch Brook is Core Habitat for the Appalachian Brook Crayfish, a Species of Special Concern. This secretive crayfish is restricted to the Hoosic River Watershed in Massachusetts, where it tunnels under large rocks and boulders in hillstreams such as Birch Brook. Potential threats to this species include competition from introduced, non-native crayfish species as well as habitat degradation from damming or development in the adjacent riparian areas.



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